State of Maine
Department of Environmental Protection
Bureau of Air Quality Control

Dry Cleaner Inspection Checklist

GENERAL INFORMATION

Name of Facility	_____
Contact Name	_____
Location	_____
City	_____
Telephone	_____
Mailing address	_____
(if different from plant location)	_____
	_____

TO BE IN COMPLIANCE, ALL APPLICABLE QUESTIONS MUST BE ANSWERED "YES"

Machines

1.) How many transfer machines are located at the facility? _____
If none, please go to question #2

If machine is located at a major source (as defined in question #8): ❑ YES ❑ NO

a.) Is the transfer machine located in a totally enclosed room that is impermeable to perchloroethylene vapors **and** designed and operated at a negative pressure at each opening? ❑ YES ❑ NO

b.) Is there a control device that the air/perchloroethylene vapor is routed through when the washer door is opened ? ❑ YES ❑ NO

c.) Is there a separate control device installed to capture all of the perchloroethylene vapors that are vented from that room ?

2.) How many dry-to-dry machines are located at the facility? _____

3.) Are there other types of machines at the facility; if so, describe _____
_____
_____

4.) If transfer machines are present, were they installed on or before 9/21/93? _____
(Installation of new or used transfer machines is banned on or after 9/22/93).

Operation & Maintenance

5.) Does the owner/operator have on-site copies of the design specs. and operating manuals for each dry cleaning system, emission control device, and monitoring device ? ❑ YES ❑ NO

Recordkeeping

6.) Is the log book available that indicates leak detection and repair history, monthly records of perchloroethylene purchased, calculation of previous 12-month total PERC purchased, and results of all required testing? ❑ YES ❑ NO

Perchloroethylene consumption

7.) Are the calculations of the rolling yearly perchloroethylene consumption done in the following way:

- ✓ is the calculation performed on the first day of every month? ❑ YES ❑ NO
- ✓ is the calculation based on the sum of all the perchloroethylene purchases made in the previous 12 months? ❑ YES ❑ NO
- ✓ what is the most current yearly perchloroethylene consumption _____
- ✓ has the log been kept since 12/20/93 or for the last 5 years, whichever is less? (leak detection and repair has been required to be recorded since 6/2/91) ❑ YES ❑ NO

Source Type

8.) Based on the 12-month calculation of gallons of PERC purchased, and the type of machines on-site, determine if facility is major source, large area source, or small area source, by use of the following: (circle one)

(if the facility ever varies between two types of sources, the larger source applies)

	Major source	Large area source	Small area source
Dry-to-dry (only)	> 2100 gal.	≥ 140 gal. and ≤ 2100 gal.	< 140 gal.
Transfer (only)	> 1800 gal.	≥ 200 gal. and ≤ 1800 gal.	< 200 gal.
Mix of machines	> 1800 gal.	≥ 140 gal. and ≤1800 gal.	< 140 gal.

POLLUTION PREVENTION REQUIREMENTS

(applicable to all dry cleaners).

(The inspector may 1) ask for a copy of manufacturer's specifications and operating recommendations, and 2) observe a dry cleaning cycle at the facility prior to answering questions below.)

9.) Does the owner/operator of the dry cleaning facility:

- ✓ close the door of each machine immediately after transferring articles to/from the machine? ❑ YES ❑ NO
- ✓ close the door of each machine at all other times? ❑ YES ❑ NO
- ✓ operate and maintain each dry cleaning system according to the manufacturer's specifications and recommendations? ❑ YES ❑ NO
- ✓ drain all cartridge filters in their housing or other sealed container, for a minimum of 24 hours? ❑ YES ❑ NO
- ✓ store all perchloroethylene and wastes in appropriate tanks and covered containers, with no perceptible leaks? ❑ YES ❑ NO
- ✓ inspect and record in the log *(weekly if a major or a large area source/bi-weekly if a small area source)* the following system components for perceptible leaks, while the system is operating? (the owner/operator should run through their inspection routine with the inspector) ❑ YES ❑ NO

9.) (cont.)

- ❑ Hose and pipe connections, fittings, couplings, and valves
- ❑ Door gaskets and seatings
- ❑ Filter gaskets and seatings
- ❑ Pumps
- ❑ Solvent tanks and containers
- ❑ Water separators
- ❑ Muck cookers
- ❑ Stills
- ❑ Exhaust dampers
- ❑ Diverter valves
- ❑ Cartridge filter housings

- ✓ are perceptible leaks repaired within 24 hours if parts do not need to be ordered, and is the repair history recorded in the log? ❑ YES ❑ NO
- ✓ if repair parts are needed, is the order for parts (written or verbal) made within 2 working days, and recorded in the log? ❑ YES ❑ NO
- ✓ once parts are received, are they installed within 5 working days of receipt, and are the dates of receipts and installation recorded in the log? (the owner/operator should run through their inspection routine with the inspector) ❑ YES ❑ NO

CONTROL OF PERCHLOROETHYLENE

10.) Type of control technology (e.g. carbon adsorber, refrig. condenser, azeotropic unit, other).

	Machine 1	Machine 2	Machine 3
Machine type	❑ Dry-to-Dry ❑ Transfer	❑ Dry-to-Dry ❑ Transfer	❑ Dry-to-Dry ❑ Transfer
Date Machine Was Installed			
Control Device	❑ carbon adsorber. size of carbon bed _____ ❑ refrig. Condenser. tot. encl. ❑ YES ❑ NO ❑ azeotropic unit. ❑ other.	❑ carbon adsorber. Size of carbon bed _____ ❑ refrig. Condenser. tot. encl. ❑ YES ❑ NO ❑ azeotropic unit. ❑ other.	❑ carbon adsorber. size of carbon bed _____ ❑ refrig. condenser. tot. encl. ❑ YES ❑ NO ❑ azeotropic unit. ❑ other.

(Maine DEP Regulations Chapter 125 required control equipment at all dry cleaners using perchloroethylene as of October 1, 1991)

11.) When were the controls described in question #11 installed? _____
If after 10/1/91, are they totally enclosed refrigerated condensers? ❑ YES ❑ NO
(Maine regulations required this type of control after 10/1/91)

12.) If the dry cleaning facility is a major source, and a dry-to-dry machine was installed after 9/21/93, does it route perchloroethylene vapors in the drum through a carbon adsorber or equivalent device immediately before or as the door of the dry cleaning machine is opened? ❑ YES ❑ NO

Refrigerated condenser

13.) If a refrigerated condenser is used on dry-to-dry, dryer, or reclaimer machine, is it:

- ✓ operated so that no perchloroethylene is released to the atmosphere while machine drum is rotating? ❑ YES ❑ NO
- ✓ operated with a diverter valve, to prevent ambient air (drawn into the drum when the machine is open) from passing through the refrigerated condenser? ❑ YES ❑ NO

14.) If a refrigerated condenser control is used on a washer, is it;

- ✓ operated so no perchloroethylene is released to the atmosphere until the washer door is opened? ❑ YES ❑ NO
- ✓ is the coil not used for any other machine at the facility? ❑ YES ❑ NO

Carbon adsorbers

15.) If a carbon adsorber is used to control the machines, is it *not* bypassed at any time? ❑ YES ❑ NO

16.) If carbon adsorber control is used, is the air velocity at least 100 feet per minute through the machine door and into the exhaust hood openings? ❑ YES ❑ NO

17.) Is the adsorber operated at an air flow capacity at least equal to the unrestricted total exhaust gas flow rate of the dry cleaning machines? ❑ YES ❑ NO

18.) Is the carbon regenerated based on the ratio of 2.83 lbs. of garments cleaned per pound of carbon (For example, if you have a 300 lb. carbon bed, you may clean up to 850 lbs. of garments before regeneration is required)? ❑ YES ❑ NO

Azeotropic units

19.) If an azeotropic unit is used,

- ✓ is there a fan which draws air from the cage causing fresh air to be drawn in through the loading door? ❑ YES ❑ NO
- ✓ is it operational when the cage door is opened? ❑ YES ❑ NO
- ✓ does the unit have a temperature gage which measures the inlet and outlet temperatures? ❑ YES ❑ NO
  - ✓ what is the inlet temperature? _____ ºF
  - ✓ what is the outlet temperature? _____ ºF
- ✓ is there a temperature gage on the lint trap door? ❑ YES ❑ NO
  - ✓ what is the temperature at the lint trap door? _____ ºF
- ✓ are all steam and condensing coils clean and free of any lint? ❑ YES ❑ NO
- ✓ is there any hard lint build-up on the interior of the machine? ❑ YES ❑ NO
- ✓ is the lint bag changed at least three times per day? ❑ YES ❑ NO

REQUIRED MONITORING FOR MAJOR AND LARGE AREA SOURCES

(Inspector will ask for demonstration of how monitoring is performed, and for a copy of the manufacturers' specifications, and the operation/maintenance recommendations for the monitoring equipment).

20.) If the dry cleaning machines have refrigerated control, ❑ YES ❑ NO

- ✓ is the temperature at the outlet of the condenser monitored and recorded weekly in the log? ❑ YES ❑ NO
- ✓ is the temperature 45 ºF or less, measured with an accuracy of ± 2 ºF
- ✓ is the sensor used according to manufacturer specifications? ❑ YES ❑ NO

21.) If the dry cleaning machines are washers of a transfer machine system, and have refrigerated condenser control,

- ✓ is the temperature at the outlet and at the inlet of the condenser monitored and recorded weekly? ❑ YES ❑ NO
- ✓ is the temperature measured at the outlet and inlet measured with a temp. sensor designed with a range at least from 32 ºF to 120 ºF, with an accuracy of ± 2 ºF ? ❑ YES ❑ NO
- ✓ is the difference between the inlet and outlet temperatures greater than or equal to 20 øF, and is this difference recorded in the log weekly? ❑ YES ❑ NO

22.) If the dry cleaning machines have carbon adsorber control (whether as primary control or as a required addition to a refrigerated condenser on new dry-to-dry machines at a major source),

- ✓ is the perchloroethylene concentration monitored and recorded in the log on a weekly basis? ❑ YES ❑ NO
- ✓ is the concentration of perchloroethylene measured at the carbon adsorber exhaust with a colorimetric detector tube, and according to manufacturer's specifications on a weekly basis? ❑ YES ❑ NO
- ✓ is the measurement taken while the dry cleaning machine is venting to the carbon adsorber at the end of the last dry cleaning cycle prior to desorption of the carbon adsorber? ❑ YES ❑ NO
- ✓ is the perchloroethylene concentration equal to or less than 100 ppmv? ❑ YES ❑ NO
- ✓ is the colorimetric detector tube designed to measure 100 ppmv of perchloroethylene in air, with an accuracy of ± 25 ppmv? ❑ YES ❑ NO
- ✓ is the sampling port within the exhaust outlet easily accessible? ❑ YES ❑ NO
  1) and located at least 8 duct diameters downstream from any flow disturbances, such as a bend, expansion, contraction, or outlet? ❑ YES ❑ NO
  2) Is the sampling port downstream from no other inlet? ❑ YES ❑ NO
  3) Is the port at least 2 duct diameters upstream from any flow disturbance? ❑ YES ❑ NO

23.) If the facility is a "new major source," with refrigerated condenser control, and with carbon adsorption,

- ✓ is perchloroethylene concentration in the drum at the end of a cycle measured weekly with a colorimetric detector tube? ❑ YES ❑ NO
- ✓ is the colorimetric detector tube inserted into the open space above the clothing at the rear of the drum immediately upon opening the machine door? ❑ YES ❑ NO
- ✓ is the perchloroethylene concentration equal to or less than 300 ppmv? ❑ YES ❑ NO
- ✓ is the colorimetric tube designed to measure 300 ppmv of perchloroethylene in air, with an accuracy of ± 75 ppmv? ❑ YES ❑ NO

If you answered any of the questions with anything other than a confident "YES!", then you may not be in compliance with all of the requirements.